Project ID	Pgm Code	PRAS Needed	Full Report Needed	Project Title	PI Name	Group
95019	XA3B	PRAS	Full	Solution Adaptive Method for Low Speed Flows and All Speed Flows	Jeffrey Saltzman	CIC-19
95608	XA5B	PRAS	Full	Geometrically-Compatible 3-D Monte Carlo and Discrete-Ordinates Methods	Jim Morel	CIC-19
97035	XABX	PRAS		3-D Unstructured Hexahedral-Mesh Sn Transport Methods	Jim Morel	CIC-19
97036	XABY	PRAS		Completely Parallel ILU Preconditioning for Solution of Linear Equations	Wayne Joubert	CIC-19
96310	XAE4	PRAS		Elliptic Solvers for Adaptive Mesh Refinement Grids	Daniel Quinlan	CIC-3
96645	XADL	PRAS	Full	Crisis Forecasting	Andrew White	CIC-ACL
97061	XAGY	PRAS	Full	Advanced Telemedicine development	David Forslund	CIC/ACL
97521	XAEP	PRAS	Full	Technologies for the Oil and Gas Industry	Sue Goff	CITET-PO
97522	XAER	PRAS	Full	Technology for CO2 Emissions Monitoring and Control	Edward Joyce	CITET-PO
96197	XAD2	PRAS		Fundamentals Of Laser Ablation In The Analysis Of Geological Materials	Aaron Koskelo	CST-1
96636	XAN8	PRAS		Understanding and Controlling Self-Assembly	Basil Swanson	CST-1
97032	XABM	PRAS		Thermal Detection of DNA and Proteins During Gel Electrophoresis	Roger Johnston	CST-1
97045	XAFX	PRAS	Full	Enhanced Analytical Performance Of Laser-Induced Breakdown Spectroscopy	David Cremers	CST-1
97534	XAFE	PRAS		Thin Film Sensors for Nerve and Mustard Agents	Basil Swanson	CST-1
96351	XAF2	PRAS		Weak Interaction Measurements With Optically Trapped Radioactive Atoms	David Vieira	CST-11
97043	XAGA	PRAS	Full	A Search For Superradiant Emission States In Nuclear Isomer Crystals	Robert Rundberg	CST-11
97506	XADY	PRAS	Full	Photo-Controlled Devices for Nuclear Materials Separation	Rebecca Chamberlin	CST-11
97530	XAFA	PRAS	Full	Development of an Isotope Separator for Studies of Radioactive Species	Jerry Wilhelmy	CST-11
97615	XADN	PRAS		Quantum Technologies	David Vieira	CST-11
96550	XAH9	PRAS	Full	Separation Science and Technology	Barbara Smith	CST-12
95116	XA2J	PRAS	Full	Asymmetric Catalysis in Organic Synthesis	John Watkin	CST-18
95425	XA5W	PRAS	Full	Heterogeneous Oxidative and Polymerization Processes in Supercritical Fluids; CO2 as a Reagent, a Protecting Group, and as a Solvent for Chemical Processing	William Tumas	CST-18
95678	XA4D	PRAS	Full	Short-Pulsed, Electric-Discharge Degradation of Toxic and Sludge Wastes	Louis Rosocha	CST-18
96088	XAB4	PRAS		Reactivity at Metal Centers Bound to Water-Soluble Catalysts	Nancy Sauer	CST-18
96620	XAM1	PRAS		Multidisiplinary Science-Based Bioremediation	James Brainard	CST-18
97054	XAGL	PRAS	Full	Tandem Metal-Mediated Synthesis	Tom Baker	CST-18
97523	XAFU	PRAS		Target Irradiation For Radioisotope Production	Eugene Peterson	CST-18
97603	XADA	PRAS		Catalysis Science and Technology	Kevin Ott	CST-18
95086	XA2E	PRAS	Full	Sum-Frequency Generation Studies of Membrane Transport Phenomena	Richard Dyer	CST-4
95121	XA2M	PRAS	Full	Optical Imaging Through Turbid Media Using a Degenerate Four-Wave Mixing Correlation Time Gate	Irving Bigio	CST-4
95166	XA2Y	PRAS	Full	Characterization and Manipulation of Broken Symmetry Materials at Phase Boundaries	Robert Donohoe	CST-4
95491	XA7X	PRAS	Full	Deformable Human Body Model Development	William Wray	CST-4
95626	XA8K	PRAS	Full	Advanced NMR Technology for Bioscience and Biotechnology	Jill Trewhella	CST-4

Project ID	Pgm Code	PRAS Needed	Full Report Needed	Project Title	PI Name	Group
95681	XA4B	PRAS	Full	Investigations of Biomimetic Light Energy Harvesting Pigments	Robert Donohoe	CST-4
96068	XAB2	PRAS		Uses of Novel Selenium-Containing Chiral Derivatizing Agents	Louis Silks	CST-4
96274	XAD9	PRAS		A Molecular Architectural Approach to Novel Electro-Optical Materials	Dequan Li	CST-4
97020	XAAN	PRAS		The Role of Low-Frequency Collective Modes in Biochemical Function: Ligand Binding and Coorperativity in Calcium-Binding Proteins	Jill Trewhella	CST-4
97024	XAAU	PRAS		Characterization of Propane Monooxygenase: Initial Mechanistic Studies	Pat Unkefer	CST-4
97505	XADX	PRAS	Full	Advanced Spectroscopic and Imaging Diagnostics for Breast Cancer	Irving Bigio	CST-4
97617	XADR	PRAS		Next Generation Biological Toxin Sensors	Pat Unkefer	CST-4
95113	XA2H	PRAS	Full	New Fullerene-Based Mixed Materials: Synthesis And Characterization	Duncan McBranch	CST-6
95206	XA2R	PRAS	Full	Minerals of the Earth's Deep Interior	David Schiferl	CST-6
95207	XA2T	PRAS	Full	Heterogeneous Processing of Bromine Compounds by Atmospheric Aerosols: Relation to the Ozone Budget	Jeanne Robinson	CST-6
95493	XA7Y	PRAS	Full	Advanced Ignition and Propulsion Technology Program	Richard Oldenborg	CST-6
96082	XAB3	PRAS		Heterogenization of Homogeneous Catalysts: The Effect of the Support	William Earl	CST-6
96638	XAP1	PRAS		Controlling Function of Polar Organic Multilayers	Duncan McBranch	CST-6
97023	XAAT	PRAS		Classical Kinetic Mechanisms Describing Heterogeneous Ozone Depletion	Bryan Henson	CST-6
97025	XAAW	PRAS		Ultrafast Solid-State Electron Transfer In Donor-Acceptor Conducting Polymers	Duncan McBranch	CST-6
97030	XABG	PRAS		Ices on Titan: Laboratory Measurements That Complement The Huygens Probe	Jeanne Robinson	CST-6
97527	XAEX	PRAS	Full	Decontamination of Chemical and Biological Warfare Agents in the Urban Arena	William Earl	CST-6
96598	XAAE	PRAS	Full	Field Detection of Chemical Agents by Membrane Introduction Mass Spectrometry	Philip Hemberger	CST-7
97503	XADW	PRAS	Full	Hydrogen Gas Getters: Susceptibility to Poisoning	Eugene Mroz	CST-7
97014	XABE	PRAS		High Resolution Records of Global Climate Change	Steven Goldstein	CST-9
97537	XAFH	PRAS	Full	Development of TRU Waste Mobile Analysis Methods for RCRA-Regulated Metals.	Cynthia Mahan	CST-9
95652	XA4C	PRAS	Full	Development of Inexpensive Continuous Emission Monitors for Feedback Control of Combustion Devices that Minimize Greenhouse Gases, Toxic Emissions, and Ozone Damaging Products	David Funk	DX-2
96003	XAA2	PRAS		Optical Wavepackets (Optical Bullets): A New Diffraction Free Form of Light Travel	David Funk	DX-2
95643	XA4N	PRAS	Full	Laser-Sheet Imaging of HE-Driven Interfaces	Robert Benjamin	DX-3
96585	XAK4	PRAS	Full	High-Magnetic-Field Research Collaborations	Jeff Goettee	DX-3
97604	XADB	PRAS		Advancing X-Ray Hydrodynamic Radiography: Radiography Chain Model	Daniel Prono	DX-DO
97605	XADC	PRAS		Advancing X-ray Hydrodynamic Radiography: Advanced Cathodes	Daniel Prono	DX-DO
97606	XADD	PRAS		Advancing X-ray Hydrodynamic Radiography: Multi-pulse Accelerator Cores and Injectors	Daniel Prono	DX-DO
97607	XADE	PRAS		Advancing X-ray Hydrodynamic Radiography: Multi-pulse Converter Development	Daniel Prono	DX-DO
97608	XADF	PRAS		Advancing X-ray Hydrodynamic Radiography: Multi-pulse X-ray Detectors	Daniel Prono	DX-DO

Project ID	Pgm Code	PRAS Needed	Full Report Needed	Project Title	PI Name	Group
96538	XAH2	PRAS	Full	Modeling and Assessment of Concrete and the Energy Infrastructure	George Guthrie	EES-1
97616	XADP	PRAS		High Performance Computing Pilot Project - Urban Security	Grant Heiken	EES-1
97815	XAFN	PRAS		Lithospheric Processes	W. Scott Baldridge	EES-1
96180	XAD1	PRAS		Sedimentary Basin Response to Strong Ground Motion in Populous Regions	Paul Johnson	EES-4
96534	XAG9	PRAS	Full	Directed Energy Methods for Enhanced Transport of Sub-Surface Organics	Paul Johnson	EES-4
97814	XACR	PRAS		Earth Materials and Earth Dynamics	Thomas Shankland	EES-4
95640	XA4P	PRAS	Full	Development of the First Nonhydrostatic Nested-Grid Grid-Point Global Atmospheric Modeling System on Parallel Machines	Chih Yue J Kao	EES-5
96524	XAG5	PRAS	Full	Improved Atmospheric Transport For Risk Assessment	Daniel Cooper	EES-5
96532	XAG8	PRAS	Full	In Situ Bioremediation of TCE-Contaminated Groundwater	Nina Rosenberg	EES-5
97047	XAEC	PRAS	Full	Numerical Simulation of Explosive Volcanism and Its Effects on the Atmosphere	Gregory Valentine	EES-5
97524	XAET	PRAS	Full	A Simulator for Copper Ore Leaching	Bryan Travis	EES-5
97528	XAEY	PRAS		Moment Equations for Two-Phase Flow in Random Porous Media	Dongxiao Zhang	EES-5
97620	XAGC	PRAS	Full	Seismic Wave Propagation Modeling	Eric Jones	EES-5
97063	XAHB	PRAS	Full	Data/Model Integration for Vertical Mixing in the Stable Arctic Boundary Layer	Sumner Barr	EES-8
96149	XAC3	PRAS		Numerical Simulations of Convection Experiments and the Earth's Interior	Gary Glatzmaier	EES-IGPP
97812	XACN	PRAS		Elements of Water Resources and Urban Pollution	Charles Keller	EES-IGPP
97813	XACP	PRAS		Towards a Full 3-D Model of the Earth's Mantle and Core	Gary Glatzmaier	EES-IGPP
95004	XA2K	PRAS	Full	A Comprehenesive Monitoring System for Damage Identification and Location in Large Structural and Mechanical Systems	Charles Farrar	ESA-EA
95644	XA4H	PRAS	Full	Neural Network Based System for Damage Identification and Location in Structural and Mechanical Systems	Charles Farrar	ESA-EA
96561	XAJ4	PRAS	Full	Supporting Technologies for a Long-Pulse Spallation Source	Daniel Weinacht	ESA-EA
97017	XAAX	PRAS		The Compliance Method for Measuring Residual Stress	Michael Prime	ESA-EA
97515	XAEH	PRAS		Physics Based Damage Predictions for Simulating Testing and Evaluation (T&E) Experiments	Edward Rodriguez	ESA-EA
97026	XAAY	PRAS		The Plasma Fluidized Bed	Robert Currier	ESA-EPE
97027	XAFK	PRAS		Tritium Recovery and Isotope Separation Using Electrochemical Methods	Richard Willms	ESA-TSE
97614	XADM	PRAS		Science of Polymer Based Materials Aging	Douglas Hemphill	ESA-WMM
95639	XA4W	PRAS	Full	Advanced Modeling of High Intensity Accelerators	Robert Ryne	LANSCE-1
96655	XAY4	PRAS	Full	Comparison of Cyclotron and Linacs for High-Intensity-Beam Applications	Tarlochan Bhatia	LANSCE-1
95669	XA4G	PRAS	Full	Advanced Biomolecular Materials Based on Membrane-Protein/Polymer Complexation	Gregory Smith	LANSCE-12
96600	XAK6	PRAS	Full	Neutron Scattering from Correlated Electron Systems	Robert Robinson	LANSCE-12
96604	XAK9	PRAS		Neutron Scattering Studies on Shear-Induced Structure in Polymers	Rex Hjelm	LANSCE-12
96605	XAL1	PRAS		Dynamics of Polymers at Interfaces	Gregory Smith	LANSCE-12

Project ID	Pgm Code	PRAS Needed	Full Report Needed	Project Title	PI Name	Group
96607	XAL3	PRAS		Actinide Crystal Structures with an Emphasis on Plutonium Alloys	Joyce Roberts	LANSCE-12
96641	XAP4	PRAS	Full	Advanced Research Capabilities for Neutron Science and Technology - New Polarizers	Robert Robinson	LANSCE-12
97807	XACU	PRAS		Energy Transfer In Molecular Solids	Juergen Eckert	LANSCE-12
97810	XACX	PRAS		Vesicle and Lamellar Phase Stability: An Experimental Approach to a Problem Central to the Theory of Complex Fluids	Rex Hjelm	LANSCE-12
96634	XAN6	PRAS		Molten Salt and Molten Lead Systems Studies	Francesco Venneri	LANSCE-3
96635	XAN7	PRAS		Molten Salt and Separations Technologies Evaluation	Francesco Venneri	LANSCE-3
95187	XA3M	PRAS	Full	A Compact Compton Backscatter X-Ray Source For Mammography And Coronary Angiography	Dinh Nguyen	LANSCE-9
95194	XA3N	PRAS	Full	High-Power, High-Frequency, Annular-Beam Free-Electron Maser	Michael Fazio	LANSCE-9
97009	XABK	PRAS		Subpicosecond Electron Bunch Diagnostic	Bruce Carlsten	LANSCE-9
97010	XAAK	PRAS		Plasma-Wakefield Accelerator	Bruce Carlsten	LANSCE-9
97049	XAGE	PRAS	Full	Production and Trapping of Ultra Cold Neutrons in Superfluid Helium	Geoffrey Greene	LANSCE-DO
96602	XAK7	PRAS		X-ray and Neutron Characterization of Transition Metal Oxides	Michael Fitzsimmons	LANSCE-MLNSC
97518	XAEL	PRAS	Full	Molten Metal Target Development for High-Power Neutron Spallation Sources	Eric Pitcher	LANSCE-MLNSC
95091	XA2F	PRAS	Full	Determining The Role Of The Telomere On The Severity Of Birth Defects	Michael Altherr	LS-3
95677	XA4A	PRAS	Full	Similarity Landscapes: An Improved Method for Scientific Visualization of Information from Protein and DNA Database Searches	Norman Doggett	LS-3
97019	XAAM	PRAS		Development of a Human Artificial Chromosome	Norman Doggett	LS-3
95078	XA2D	PRAS	Full	Optimization and Monitoring of Hollow-Fiber Bioreactors	James Freyer	LS-4
97021	XAAP	PRAS		Substrate-Dependent Cell Cycle Disturbances in Response to Ionizing Radiation	Donna Gadbois	LS-4
96504	XAF8	PRAS	Full	Universal Biological Agent Point Sensor Program Development	Gary Salzman	LS-5
95602	XA8H	PRAS	Full	Competency Development in Antibody Production for Cancer Cell Biology	Min Park	LS-6
96030	XAA8	PRAS		Identification and Characterization of a Human DNA Double-Strand Break Repair Complex	David Chen	LS-6
97048	XAGD	PRAS	Full	Identification Of Proteins That Associate With UBL1, a DNA Damage Repair Regulating Protein.	Z. Shen	LS-6
97053	XAGV	PRAS	Full	Genome Instability	David Chen	LS-6
96017	XAA6	PRAS		Engineering the Specificity of xylR, a Bacterial Protein That Detects Chemicals in the Environment	Thomas Terwilliger	LS-8
96440	XAX9	PRAS		Structure and Function of Nucleosomes Positioned on DNA Repeated Sequences Associated with Human Diseases	E. Morton Bradbury	LS-DO
97610	XADH	PRAS		An Integrated Structural Biology Resource: Applications to the Structure and Function of DNA Repair Enzymes PAS	Scott Cram	LS-DO
95073	XA2B	PRAS	Full	Dynamics of Quantum Wave Packets	Timothy Gosnell	MST-10

Project ID	Pgm Code	PRAS Needed	Full Report Needed	Project Title	PI Name	Group
95153	XA2W	PRAS	Full	Thermodynamic and Electrodynamic Studies of Unusual Narrow Gap Semiconductors	Albert Migliori	MST-10
95459	XA6X	PRAS	Full	Development of High Magnetic Fields for Energy Research	Joe Thompson	MST-10
95675	XA4U	PRAS	Full	Science and Technology of Reduced-Dimensional Magnetic Materials	Robert Heffner	MST-10
96213	XAD3	PRAS		Magnetic Resonance Force Microscope Development	P. Chris Hammel	MST-10
96215	XAD4	PRAS		All-Solid-State Four-Color Laser	Timothy Gosnell	MST-10
96627	XAM8	PRAS		Role of Charge Localization in the Basic High Temperature Superconductivity Mechanism	P. Chris Hammel	MST-10
96629	XAN1	PRAS		Synthesis and Characterization of Correlated Electron Materials	Joe Thompson	MST-10
97015	XAAL	PRAS		Laser Cooling of Solids	Timothy Gosnell	MST-10
97016	XABR	PRAS		Intrinsic Fine-Scale Structure in Complex Electronic Materials: Beyond Global Crystallographic Analysis	Albert Migliori	MST-10
97611	XADJ	PRAS		Electrons in High Magnetic Fields -- Femtosecond Dynamics	Timothy Gosnell	MST-10
97612	XADK	PRAS		Electrons in High Magnetic Fields - Ground State Electronic Structure of 5f Materials	Aloysius Arko	MST-10
95122	XA2N	PRAS	Full	Femtosecond Scanning Tunneling Microscope	Antoinette Taylor	MST-11
95163	XA2P	PRAS	Full	The Development of Fullerene Based Hydrogen Storage System	S Gottesfeld	MST-11
96054	XAB1	PRAS		Solvation And Ionic Transport In Polymer Electrolyte Membranes	Thomas Zawodzinski	MST-11
96236	XAD7	PRAS		Understanding Interfacial Charge Transport in Organic Electronic Materials: The Key to a Revolutionary New Electronics Technology	Darryl Smith	MST-11
96367	XAF3	PRAS		Determination of Optical-Field Ionization Dynamics in Plasmas through Direct Measurement of the Optical Phase Change	Antoinette Taylor	MST-11
96505	XAF9	PRAS	Full	Sensors for Point Detection of Biological and Chemical Warfare Agents	Thomas Zawodzinski	MST-11
96560	XAJ3	PRAS	Full	A Diagnostic Tool for the Characterization of Optoelectronic Materials and Devices Based on Frequency-Resolved Optical Gating	Antoinette Taylor	MST-11
96637	XAN9	PRAS		Tailoring the Interfacial Electronic Structure of Organic Electronic Materials and Devices	Ian Campbell	MST-11
97005	XABH	PRAS		Soliton Optical Communications	Antoinette Taylor	MST-11
97031	XABL	PRAS		Novel Signal Processing with Nonlinear Transmission Lines	David Reagor	MST-11
97058	XAGU	PRAS	Full	The Electrochemical Properties Of Bundles Of Single-Walled Nanotubes	Thomas Zawodzinski	MST-11
97517	XAEK	PRAS		Underground Communication	David Reagor	MST-11
96257	XAD8	PRAS		Development of a Fundamental Understanding of Chemical Bonding and Electronic Structure in Spinel Compounds	Kurt Sickafus	MST-4
96445	XAY6	PRAS	Full	Exploration of Technologies of Use to Civil Security Forces	Eugene Farnum	MST-4
96510	XAG3	PRAS	Full	Ceramic/Polymer Functionally Graded Material (FGM) Lightweight Armor System	John Petrovic	MST-4
97801	XACT	PRAS		Fundamental Studies of Radiation Damage in Two-Phase Oxide Composites	Kurt Sickafus	MST-5
96603	XAK8	PRAS		A Neutron Diffraction and Computational Micromechanics Study of Deformation in Advanced Materials	Mark Bourke	MST-5

Project ID	Pgm Code	PRAS Needed	Full Report Needed	Project Title	PI Name	Group
97001	XABN	PRAS		Experimental Determination of Statistical Parameters For Improving a Micromechanical Model of Ductile Fracture	Anna Zurek	MST-5
97011	XABP	PRAS		Experimental and Theoretical Investigation of Fracture and Deformation of A Revolutionary High Temperature Gamma-TiAl Alloy	George Gray III	MST-5
97602	XAFP	PRAS	Full	Dynamic Fracture of Heterogeneous Materials	Michael Stout	MST-5
97809	XACW	PRAS		Manipulation of Residual Stresses to Improve Material Properties	Mark Bourke	MST-5
96233	XAD6	PRAS		Theoretical and Experimental Investigation on the Low Temperature Properties of the NbCr2 Laves Phase	Dan Thoma	MST-6
95159	XA2X	PRAS	Full	New Deposition Processes for the Growth of Oxide and Nitride Thin-Films	Kevin Hubbard	MST-7
97502	XADU	PRAS		New Membrane Solutions for Hydrogen Isotope Issues	Robert Dye	MST-7
97509	XAEB	PRAS	Full	Carbon Based Prosthetic Devices	David Devlin	MST-7
97511	XAED	PRAS		Diamond and Diamond-Like Materials as Hydrogen Isotope Barriers	Larry Foreman	MST-7
97526	XAEW	PRAS		Nonintrusive Characterization of High Explosives in Nuclear Weapons Systems: Dielectric Relaxation Analysis of PBX	Mark Smith	MST-7
95662	XA3R	PRAS	Full	Development of Ion Beam Techniques for the Study of Special Nuclear Materials Related Problems	Carl Maggiore	MST-CMS
95676	XA3T	PRAS	Full	Bulk Amorphous Materials	Ricardo Schwarz	MST-CMS
96583	XAK3	PRAS	Full	Fundamental and Applied Studies of Helium Ingrowth in Plutonium	Michael Stevens	MST-CMS
96615	XAL8	PRAS		New Initiatives in Materials Characterization, Modeling and Synthesis	Don Parkin	MST-CMS
96616	XAL9	PRAS		Texture Science and Technology	Michael Stevens	MST-CMS
97042	XAFL	PRAS		Optimum Design of Ultrahigh Strength Nanolayered Composites	Huijou Kung	MST-CMS
97619	XAEM	PRAS		Studies of Ultra High Strength Materials	J. Embury	MST-CMS
97804	XACF	PRAS		Structure-Property Relationships in Metal Oxides and Magnetic Materials Studied by Scanning Probe	Marilyn Hawley	MST-CMS
97805	XACG	PRAS		Structure/Property Relations in Elasticity and Plasticity	U Kocks	MST-CMS
97806	XACH	PRAS		Microstructure and Microanalysis of Materials at Atomic Resolution	Terence Mitchell	MST-CMS
96611	XAL4	PRAS		Self-Organization and Pattern Formation	Robert Ecke	MST-CNLS
97002	XAAH	PRAS		Geometric Phase, Spatial Resonance, and Control in Spatially-Extended Nonlinear Systems	Robert Ecke	MST-CNLS
96232	XAD5	PRAS		Innovative Composites Through Reinforcement Morphology Design—A Bone-Shaped-Short-Fiber Composite	Yuntian Zhu	MST-STC
96625	XAM6	PRAS		Chemistry and Microstructure of High Temperature Superconductor Interfaces	Quanxi Jia	MST-STC
96626	XAM7	PRAS		Pinning Vortices and Enhancing High Temperature Superconductor Critical Currents	Martin Maley	MST-STC
96146	XAB9	PRAS		Micro/Macroscale Coupling in Magnetospheric Plasmas	S. Peter Gary	NIS-1
96147	XAC1	PRAS		Coronal Mass Ejections in the Solar Wind	John Gosling	NIS-1

Project ID	Pgm Code	PRAS Needed	Full Report Needed	Project Title	PI Name	Group
96148	XAC2	PRAS		Striation-Image Monitoring Of Plasmaspheric, L-Resolved Electrodynamics (SIMPLE)	Abram Jacobson	NIS-1
96156	XAC4	PRAS		Low Energy Neutral Atom Imager	Herbert Funsten	NIS-1
97006	XABB	PRAS		Evolution of Coronal Mass Ejections in the Solar Wind at Low and High Heliographic Latitudes	John Gosling	NIS-1
97008	XABJ	PRAS		Imaging Time-of-Flight Ion Mass Spectrograph	Herbert Funsten	NIS-1
97029	XABF	PRAS		Balloon-Based, High-Time-Resolution Measurements Of X-Ray Emissions From Lightning	David Suszcynsky	NIS-1
97050	XAGH	PRAS	Full	A New Class of Sensors for Detecting Low Energy Particles in Space	John Gosling	NIS-1
97539	XAGN	PRAS	Full	Neutron Sensors for Locating Sites of Planetary Water Deposits	William Feldman	NIS-1
97803	XACK	PRAS		Solar Terrestrial Coupling Through Space Plasma Processes	Joachim Birn	NIS-1
96142	XAB8	PRAS		High Velocity Neutron Stars	Edward Fenimore	NIS-2
96622	XAM3	PRAS		Remote Sensing Science Thrust	Siegfried Gerstl	NIS-2
97051	XAGJ	PRAS		High Spectral Resolution Infrared Absorption and Emission Signatures As Observed Against Thermal Background Sources For Selected Molecular Species	Stephen Schmidt	NIS-2
97055	XAGP	PRAS	Full	Development of a Prototype Optical Refrigerator	Richard Epstein	NIS-2
97811	XACM	PRAS		Low Luminosity Compact Stellar Objects and the Size of the Universe	Richard Epstein	NIS-2
97538	XADT	PRAS	Full	Nuclear Measurements, Analysis, and Safeguards Science	Mark Pickrell	NIS-5
95621	XA5A	PRAS	Full	Foreign Nuclear Test Radiochemical Diagnostics	Michael MacInnes	NIS-8
95601	XA4Y	PRAS	Full	Generation and Compression of a Target Plasma for Magnetized Target Fusion	Ronald Kirkpatrick	NIS-9
96644	XAP7	PRAS		Nuclear Futures Analysis and Scenario Building	Edward Arthur	NMSM
95665	XA4T	PRAS	Full	Structural and Magnetic Characterization of Actinide Materials	Barbara Cort	NMT-5
96531	XAG7	PRAS	Full	Integration of Advanced Nuclear Separations Processes	Gordon Jarvinen	NMT-6
96593	XAX6	PRAS	Full	Advanced Nuclear Fuels Processing	Larry Avens	NMT-6
97056	XAGM	PRAS	Full	Establishment of a Room Temperature Molten Salt Capability to Measure Fundamental Thermodynamic Properties of Actinide Elements.	Wayne Smith	NMT-6
97514	XAEG	PRAS		Development of a System for Endoscopic Imaging and Spectroscopy of Pit Interiors	Pamela Benicewicz	NMT-6
97609	XADG	PRAS		Actinide Molecular Science: f-Electronic Structure In Synthesis, Spectroscopy, And Computation	Larry Avens	NMT-6
95451	XA6P	PRAS	Full	Disposition of Plutonium as Non-Fertile Fuel for Water Reactors	Kenneth Chidester	NMT-9
95481	XA7N	PRAS	Full	Human Brain Mapping: Experimental and Computational Approaches	Charles Wood	P-21
95636	XA4M	PRAS	Full	Ultra-Sensitive Sensors for Weak Electromagnetic Fields using SQUIDs for Biomagnetism, NDE and Corrosion Currents	Robert Kraus	P-21
96032	XAA9	PRAS		Protein Motions that Determine the Efficiency of Photosynthesis	Joel Berendzen	P-21
97052	XAGK	PRAS	Full	Low-Field Magnetic Resonance Imaging of Gases	David Schmidt	P-21
96391	XAF6	PRAS		Equation of State of Dense Plasmas	John Benage	P-22

Project ID	Pgm Code	PRAS Needed	Full Report Needed	Project Title	PI Name	Group
96507	XAG1	PRAS		Detection of Underground Structures, Tunnels, and Landmines	Joseph Mack	P-22
97536	XAFJ	PRAS		Miniature Flux-Gate Magnetometers for Use on Small Mobile Platforms	R. Clayton Smith	P-22
95030	XA3F	PRAS	Full	Time Reversal Tests in Polarized Neutron Reactions	J Bowman	P-23
95145	XA3G	PRAS	Full	Determination and Study of Cosmic-Ray Composition above 100 TeV	Constantin Sinnis	P-23
95455	XA6T	PRAS	Full	An Ultra Cold Neutron Facility at LANSCE	Thomas Bowles	P-23
96114	XAB6	PRAS		Quantum Cryptography for Secure Communications to Low-Earth Orbit Satellites	Richard Hughes	P-23
96349	XAF1	PRAS		Solar Neutrino Physics	Andrew Hime	P-23
96640	XAP3	PRAS	Full	Advanced Techniques for Producing, Polarizing, and Storing Ultra-Cold Neutrons	Susan Seestrom	P-23
97037	XACA	PRAS		A GaAs Detector for Dark Matter and Solar Neutrino Research	Thomas Bowles	P-23
97525	XAEU	PRAS	Full	Assessment of Cold Neutron Radiography Capability	Thomas McDonald	P-23
97531	XAFB	PRAS	Full	Development of Gamma-Ray Spectroscopy Capability at LANSCE	Ronald Nelson	P-23
95488	XA7U	PRAS	Full	Plasma Source Ion Implantation for Advanced Manufacturing	Jay Scheuer	P-24
96115	XAB7	PRAS		High Average Power Intense-Ion Beam for Materials and Other Applications	Harold Davis	P-24
96385	XAF4	PRAS		High-Intensity Laser-Matter Interaction Physics	James Cobble	P-24
96388	XAF5	PRAS		A Target Plasma Experiment for Magnetized Target Fusion	Frederick Wysocki	P-24
96523	XAG4	PRAS	Full	Removal of Transuranic Materials from Contaminated Equipment Using Plasma Decontamination	Carter Munson	P-24
97046	XAFY	PRAS	Full	Enhancements of Diagnostics for Plasma Processing of Materials	Gary Selwyn	P-24
97516	XAEJ	PRAS	Full	Application of New Techniques for EOS Data	Warren Hsing	P-24
96339	XAE7	PRAS		Neutrino Physics at Fermilab	Geoffrey Mills	P-25
96639	XAP2	PRAS	Full	Neutron Metrology for SBSS	Chris Morris	P-25
97041	XACE	PRAS		3He Magnetometry for a Neutron EDM Measurement	Martin Cooper	P-25
97044	XAGB	PRAS	Full	Observables In Relativistic Heavy Ion Collisions	John Sullivan	P-25
97618	XAFR	PRAS		Advanced Dynamic Radiography With Protons	Chris Morris	P-25
95146	XA3H	PRAS	Full	A Continuous Watch of the Northern Sky above 40 TeV with the CYGNUS Array	Cyrus Hoffman	P-DO
97004	XAFM	PRAS		Search for Cosmic Antimatter with Milagrito	Cyrus Hoffman	P-DO
97059	XAGT	PRAS	Full	Advanced Techniques For The Analysis Of Nuclear Crisis Stability, Deterrence, And Latency	Gregory Canavan	P-DO
95053	XA2C	PRAS	Full	Structure and Thermodynamics of Surface Recognition	Goutam Gupta	T-10
95634	XA3X	PRAS	Full	Nonlinear Analysis of Biological Sequences	David Torney	T-10
96013	XAA5	PRAS		Theoretical Studies of Allosteric Changes and DNA Binding of cAMP Dependent Transcription Activation Protein	Angel Garcia	T-10
97038	XACB	PRAS		Testing the Standard Model Using Bottom Quarks	Goutam Gupta	T-10
95633	XA3W	PRAS	Full	Simulation Methods for Advanced Scientific Computing	James Gubernatis	T-11
96614	XAL7	PRAS	Full	Many-Body Theory Research	Alexander Balatsky	T-11

Project ID	Pgm Code	PRAS Needed	Full Report Needed	Project Title	PI Name	Group
96631	XAN3	PRAS		Density Function Estimation for Monte Carlo Simulations	James Gubernatis	T-11
96632	XAN4	PRAS		Novel Monte Carlo Algorithms for Statistical Mechanics	James Gubernatis	T-11
95680	XA4E	PRAS	Full	High-Performance Computing of Electron Microstructures	Alan Bishop	T-11/CNLS
96628	XAM9	PRAS		Theory and Modeling of Correlated Electron Materials	Alan Bishop	T-11/CNLS
97802	XACJ	PRAS		Multiscale Phenomena in Materials	Alan Bishop	T-11/CNLS
95058	XA2G	PRAS	Full	Decay of Surface Nanostructures via Long-Time-Scale Dynamics	Arthur Voter	T-12
97007	XAFG	PRAS		Recombination Kinetics. Correcting The Textbooks.	Russell Pack	T-12
97513	XAEF	PRAS	Full	Simulation of Thin-film Formation	Robert Walker	T-12
95070	XA3D	PRAS	Full	Geometry In The Large And Hyperbolic Chaos	Brosl Hasslacher	T-13
95688	XA4F	PRAS	Full	Covariation of Mutations: A Computational Approach for Determination of Function and Structure from Sequence	Alan Lapedes	T-13
96305	XAE3	PRAS		Designing A Micro-Mechanical Transistor	Ronnie Mainieri	T-13
96548	XAH8	PRAS	Full	Characterizing Mechanical Effects of Aging Damage (Year 2)	Thomas Sewell	T-14
96592	XAX2	PRAS	Full	Interpretation of Experiments	Paul Dotson	T-14
96346	XAE9	PRAS		Chiral Symmetry in Finite Nuclei	David Madland	T-2
95651	XA4R	PRAS	Full	Binding Carbon Dioxide in Mineral Form: A Critical Step Towards a Zero-Emission Power Plant	Klaus Lackner	T-3
96109	XAB5	PRAS		Material Processing for Self-Assembling Machine Systems	Klaus Lackner	T-3
97018	XABT	PRAS		A Theoretical Description Of Inhomogeneous Turbulence	Leaf Turner	T-3
97508	XAEA	PRAS	Full	Development of Predictive Simulation Capability for Reactive Multiphase Flow	W. Brian VanderHeyden	T-3
95050	XA2A	PRAS	Full	The Calculation of Satellite Line Structures in Highly Stripped Plasmas	Joseph Abdallah	T-4
96006	XAA3	PRAS		Nonlinear Atom Optics	Peter Milonni	T-4
96008	XAA4	PRAS		Transient Quantum Mechanical Processes	Lee Collins	T-4
97512	XAEE	PRAS	Full	Interconnect Performance Predictability	David Kilcrease	T-4
96343	XAE8	PRAS		Neutrinos and Theory of Weak Interactions	Joseph Carlson	T-5
96163	XAC5	PRAS		Cosmology with Massive Neutrinos	Wojciech Zurek	T-6
96164	XAC6	PRAS		Close Encounters of Asteroids and Comets to Planets	Jack Hills	T-6
96166	XAC7	PRAS		Modeling Core Collapse Supernovae in Three Dimensions	Michael Warren	T-6
96167	XAC8	PRAS		Regge Geometrodynamics in Support of Gravity Wave Astronomy	Raymond Laflamme	T-6
97012	XABC	PRAS		Supermassive Black Holes and the Strong Field Limit of General Relativity	Wojciech Zurek	T-6
97013	XABD	PRAS		Determining The Mass Of The Universe	Michael Warren	T-6
97057	XAGR	PRAS	Full	Quantum Information Capacity in the Presence of Noise	Raymond Laflamme	T-6
95013	XA3A	PRAS	Full	Combinatorics, Geometry, and Mathematical Physics	William Chen	T-7
95068	XA3C	PRAS	Full	The Fundamental Role of Solitons in Nonlinear Differential Equations	James Hyman	T-7
95174	XA3E	PRAS	Full	Dispersive Internal Long Wave Models	Roberto Camassa	T-7

Project ID	Pgm Code	PRAS Needed	Full Report Needed	Project Title	PI Name	Group
96286	XAE1	PRAS		A Self-Consistent Multiscale Theory of Internal Wave, Mean-Flow Interactions in the Ocean	Darryl Holm	T-7
96287	XAE2	PRAS		Particles and Patterns in Cellular Automata	Erica Jen	T-7
96326	XAE5	PRAS		Fiber Optic Communications Using Solitons (FOCUS)	Darryl Holm	T-7
96327	XAE6	PRAS		High-Quality Finite-Difference Schemes for Partial Differential Equations and Discrete Vector and Tensor Analysis	Mikhail Shashkov	T-7
96613	XAL6	PRAS		Applications of Nonlinear Stochastic Dynamics	Darryl Holm	T-7
95149	XA3J	PRAS	Full	Exploring and Testing the Standard Model and Beyond	Geoffrey West	T-8
97022	XAAR	PRAS		Predictive Models for Transcriptional Enhancers	Rajan Gupta	T-8
97039	XACC	PRAS		Instantons and Duality in Strongly-Coupled Quantum Theories	Michael Mattis	T-8
97040	XACD	PRAS		The QCD Phase Transition in Relativistic Heavy Ion Collisions	Frederick Cooper	T-8
97622	XAGG	PRAS	Full	Non-Equilibrium Phase Transitions	Emil Mottola	T-8
95623	XA8J	PRAS	Full	Structure, Dynamics, and Function of Biomolecules	Hans Frauenfelder	T-CNLS
96612	XAL5	PRAS		Landscapes and Dynamics of Proteins	Hans Frauenfelder	T-CNLS
97033	XABU	PRAS		Diffusion In Porous Media And Stochastic Advection	Shi-Yi Chen	T-CNLS
97060	XAGW	PRAS	Full	Advanced Algorithms for Information Science	Daniel Strottman	T-DO
97034	XABW	PRAS		New Ways of Representing Functions	George Zweig	T-DOT
96633	XAN5	PRAS		Theoretical Foundation for Adaptive Monte Carlo	Richard Picard	TSA-1
95701	XA4K	PRAS	Full	Development of an Automated Core Model for Nuclear Reactors	Russell Mosteller	TSA-10
97520	XAEN	PRAS	Full	Heatpipe Power System (HPS) Development	Michael Houts	TSA-10
97062	XAHA	PRAS	Full	Integrated Systems Analysis Applied to Environmental Remediation	R Hardie	TSA-4
97507	XAFT	PRAS		Environmental Technology Analysis Using Complex System Simulation Techniques	R Hardie	TSA-4
97533	XAFD	PRAS	Full	Point of Use VOC Control in Semiconductor Fabrication	Mark Cummings	TSA-4
97028	XABA	PRAS		Virtual Bandwidth via Stochastic Polyspectra	Murray Wolinsky	TSA-5
97540	XAGX	PRAS		National Transportation System Analysis Capability	Doug Anson	TSA-5
95696	XA4J	PRAS	Full	Development of an Integrated System for Estimating Human Error Probabilities and Modeling Their Effects	Jack Auflick	TSA-9
96591	XAW6	PRAS	Full	Reactor-Based Tritium Production	John Ireland	TSA-DO
97535	XAFF	PRAS		A Hierarchical Simulation R&D Testbed for Test and Evaluation (T&E)	Chris Barrett	TSA-DO/SA
97621	XAGF	PRAS		Evolutionary Computation	Christian Reidys	TSA-DO/SA
95032	XA3K	PRAS	Full	Delta-f and Hydrodynamic Methods for Semiconductor Transport	Lester Thode	X-DO
95611	XA5C	PRAS	Full	Advanced Three Dimensional Eulerian Hydrodynamic Algorithm Development	William Rider	X-HM
96630	XAN2	PRAS		Adaptive Monte Carlo Methods for Radiation Transport	Thomas Booth	X-TM
96025	XAA7	PRAS		Numerical Simulations of Biochemical Self-Organization: Calcium Wave Propagation and Microtubule Growth	John Pearson	XCM

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Project ID	Pgm Code	PRAS Needed	Full Report Needed	Project Title	PI Name	Group
97529	XAFW	PRAS	Full	Data Mining	Kenneth Lee	XCM
97601	XACY	PRAS		Multiscale Science for Science Based Stockpile Stewardship	Len Margolin	XHM
97808	XACL	PRAS		Algorithm Development for Ocean Models	Len Margolin	XHM
96169	XAC9	PRAS		Theoretical Research on Dwarf and Classical Novae	Warren Sparks	XNH
96420	XAR6	PRAS	Full	Texture Characterization for Primary Design	Sheila Schiferl	XNH
96642	XAP5	PRAS		Dynamic High-Strain Deformation of Metals: Experiments, Advanced Constitutive Modeling, and Computational Implementation	Dean Preston	XNH
97003	XAAJ	PRAS		Strongly Coupled Dusty Plasmas	Dan Winske	XPA
95208	XA2U	PRAS	Full	Deriving the Structure of Pre-Supernovae and Delta Scuti Stars Using Nonradial Oscillations	Joyce Guzik	XTA